This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claim 1 (original): An isolated and purified mammalian fatty-acid amide hydrolase (FAAH) Isolated fatty-acid amide that hydrolyzes *cis*-9,10-octadecenoamide, anandamide, myristic amide, palmitic amide and stearic amide.

Claims 2-4 (canceled)

Claim 5 (currently amended): The FAAH of claim 1 wherein said FAAH is characterized by inclusion of an amino acid sequence selected from a group consisting of:

a.[.]) GGSSGGEGALIGSGGSPLGLGTDIGGSIRFP **(SEQ ID NO 5)**,

b.) SPGGSSGGEGALIGS **(SEQ ID NO 6)**,

c.) ALIGSGGSPLGLGTD **(SEQ ID NO 7)**,

d.[.]) GLGTDIGGSIRFPSA **(SEQ ID NO 8)**,

e.) RFPSAFCGICGLKPT **(SEQ ID NO 9)**,

f.) GLKPTGNRLSKSGLK **(SEQ ID NO 10)**,

g.) KSGLKGCVYGQTAVQ **(SEQ ID NO 11)**,

h.) QTAVQLSLGPMARDV **(SEQ ID NO 12)**,

i.) MARDVESLALCLKAL **(SEQ ID NO 13)**,

j.) CLKALLCEHLFTLDP **(SEQ ID NO 14)**,

k.) FTLDPTVPPFPFREE **(SEQ ID NO 15)**,

l.) PFREEVYRSSRPLRV **(SEQ ID NO 16)**,

m.) RPLRVGYYETDNYTM **(SEQ ID NO 17)**,

n.) DNYTMPSPAMRRALI **(SEQ ID NO 18)**,

o.) RRALIETKQRLEAAG **(SEQ ID NO 19)**,

p.) LEAAGHTLIPFLPNN (**SEQ ID NO 20**),

q.) FLPNNIPYALEVLSA (**SEQ ID NO 21**),

r.) EVLSAGGLFSDGGRS (**SEQ ID NO 22**),

s.) DGGRSFLQNFKGDFV (**SEQ ID NO 23**),

t.) KGDFVDPCLGDLILI (**SEQ ID NO 24**),

u.) DLILILRLPSWFKRL (**SEQ ID NO 25**),

v.) WFKRLLSLLLKPLFP (**SEQ ID NO 26**),

w.) KPLFPRLAAFLNSMR (**SEQ ID NO 27**),

x.) LNSMRPRSAEKLWKL (**SEQ ID NO 28**),

y.) KLWKLQHEIEMYRQS (**SEQ ID NO 29**),

z.) MYRQSVIAQWKAMNL (**SEQ ID NO 30**),

aa.) KAMNLDVLLTPMLGP (**SEQ ID NO 31**), and

ab.) PMLGPALDLNTPGR (**SEQ ID NO 32**).

Claim 6 (original): The FAAH of claim 1 wherein said FAAH is isolated from a mammal.

Claim 7 (original): The FAAH of claim 1 wherein said FAAH is produced by expression of a recombinant DNA expression vector that includes the nucleotide sequence that encodes FAAH having a sequence selected from the group consisting of SEQ ID Nos 35, 39 and 42.

Claim 8 (original): The FAAH of claim 1 wherein said FAAH is isolated by purification by a chromatographic methodology selected from a group consisting of affinity chromatography, electric chromatography, gel filtration chromatography, ion exchange chromatography, and partition chromatography.

Claim 9 (original): The FAAH of claim 8 wherein said affinity chromatography employs a solid phase absorbant derivatized with a trifluoroketone inhibitor of FAAH for adsorbing the FAAH.

Claim 10 (original): The FAAH of claim 1 wherein said FAAH is isolated by purification as follows:

Step A: a crude source of FAAH is purified by exchange chromatography using a DEAE chromatography column to form a first elution product; then

Step B: the first elution product of said Step A is further purified by elution on an Hg affinity chromatography column to form a second elution product; then

Step C: the second elution product of said Step B is further purified by elution on a Heparin affinity chromatography column to form a third elution product; and then

Step D: the elution product of said Step C is further purified by elution on an affinity chromatography column derivatized with a trifluoroketone inhibitor of FAAH to form the purified form of FAAH.

Claim 11 (original): A method for catalyzing a hydrolysis of a fatty-acid primary amide comprising the step of contacting the fatty-acid primary amide under reaction conditions with a catalytic amount of an isolated FAAH described in claim 1.

Claim 12 (original): The method for catalyzing a hydrolysis of a fatty-acid primary amide according to claim 11 wherein the fatty-acid primary amide includes an alkyl chain having an unsaturation.

Claim 13 (original): The method for catalyzing a hydrolysis of a fatty-acid primary amide according to claim 12 wherein the unsaturation is in an alkyl chain having a *cis* configuration.

Claim 14 (original): The method for catalyzing a hydrolysis of a fatty-acid primary amide according to claim 11 wherein the fatty-acid primary amide is selected from the group consisting of *cis*-9,10-octadecenoamide, *cis*-8,9-octadecenoamide, *cis*-11,12-octadecenoamide, *cis*-13,14- docosenoamide, and a fatty-acid primary amide having the formula:

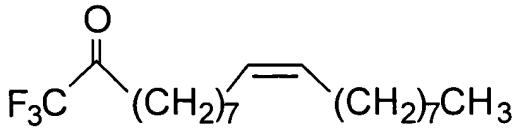
$$NH_2C(O)(CH_2)_{(6\geq n\leq 11)}CH=CH(CH_2)_{(8\geq n\leq 5)}CH_3.$$

Claim 15 (original): A method for inhibiting an enzymatically catalyzed hydrolysis of a fatty-acid primary amide by the FAAH of claim 1, the method comprising the step of contacting said FAAH with an inhibitor of the FAAH.

Claim 16 (original): The method of claim 15 wherein said fatty-acid primary amide substrate is selected from the group consisting of *cis*-9,10-octadecenoamide, anandamide, myristic amide, palmitic amide and stearic amide.

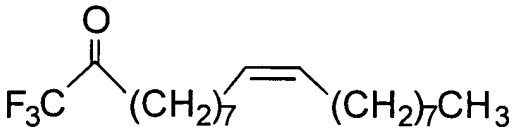
Claim 17 (original): The method according to claim 15 wherein said fatty-acid primary amide is *cis*-9,10-octadecenoamide.

Claim 18 (original): The method of claim 15 wherein said inhibitor of FAAH is selected from the group consisting of phenylmethylsulfonyl fluoride, $HgCl_2$, and a trifluoroketone having the following structure:



Claims 19 and 20 (canceled)

Claim 21 (original): A trifluoroketone inhibitor of fatty-acid amide hydrolase represented by following structure:



Claim 22 (original): A nucleic acid molecule encoding a fatty-acid amide hydrolase protein, said nucleic acid molecule having a nucleotide sequence selected from the group consisting of SEQ ID NO 35, SEQ ID NO 39 and SEQ ID NO 42.

Claim 23 (original): A nucleic acid molecule encoding a portion of a fatty-acid amide hydrolase protein, said nucleic acid molecule having the nucleotide sequence shown in SEQ ID NO 1:1-783.

Claim 24 (original): The mammalian fatty-acid amide hydrolase of claim 1 that is a human fatty-acid amide hydrolase.